

FIG. 1B

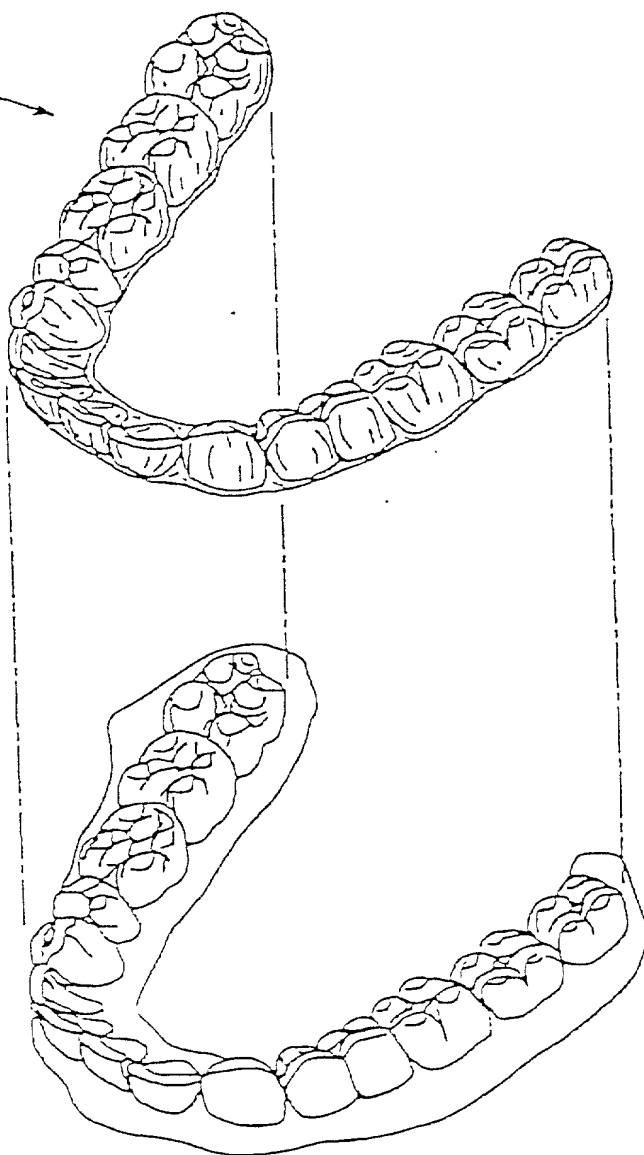
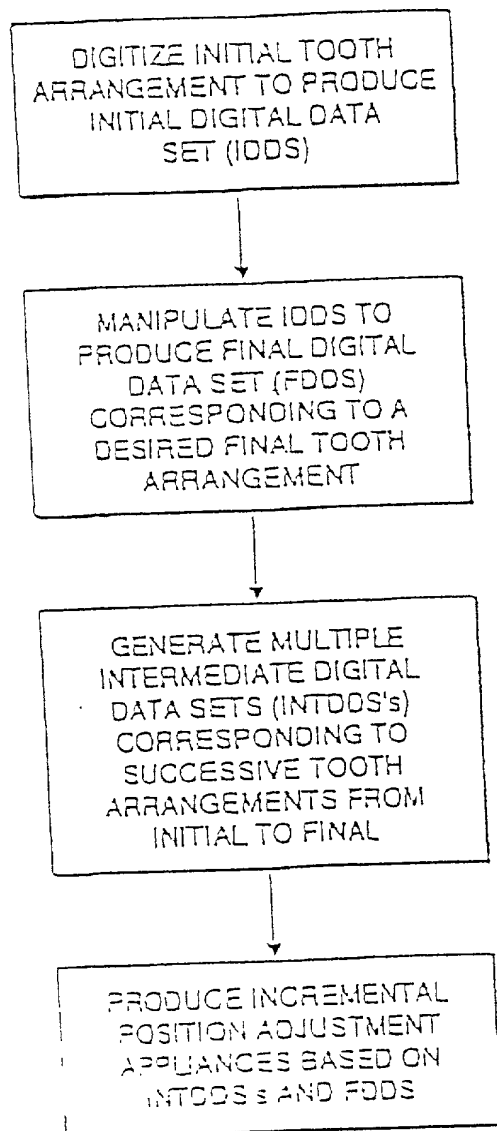


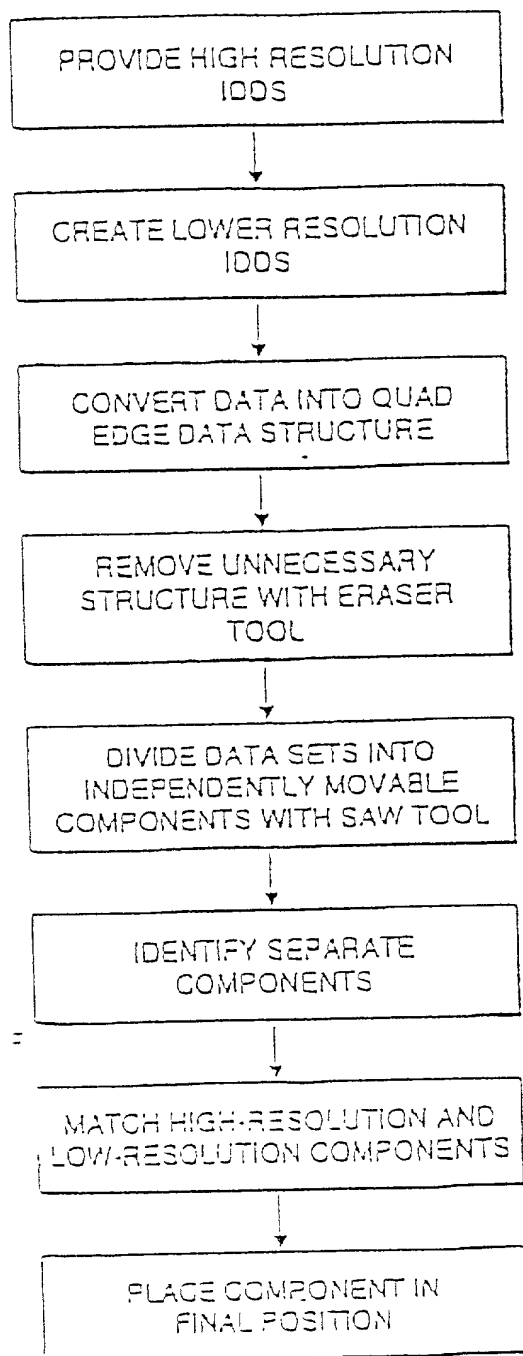
FIG. 1C



CROSS-REFERENCE  
FIG. 3

CROSS-REFERENCE  
FIG. 6

FIG. 2



CROSS-REFERENCE  
FIG. 4A

CROSS-REFERENCE  
FIG. 5

FIG. 3

09745825 122100

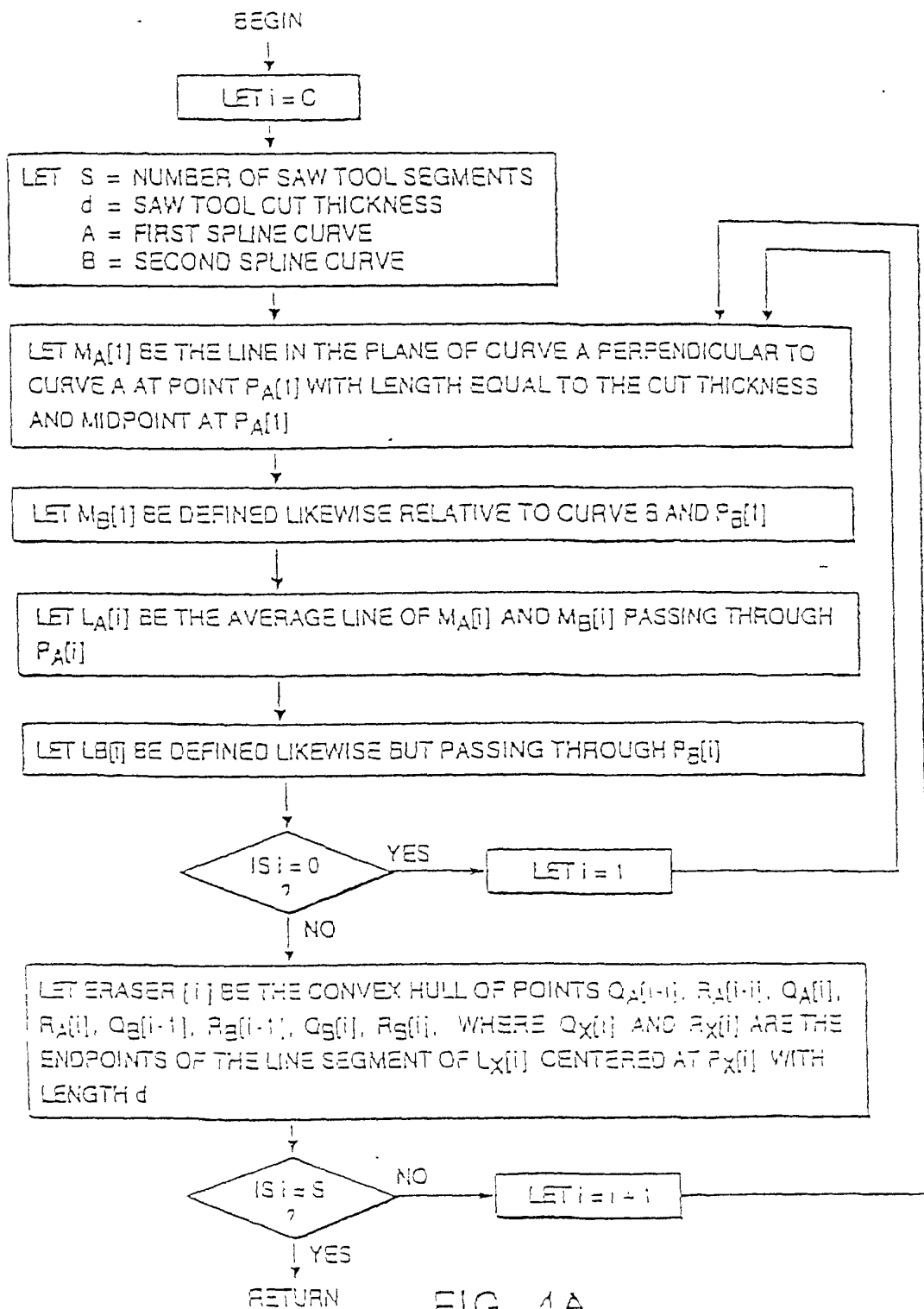


FIG. 4A

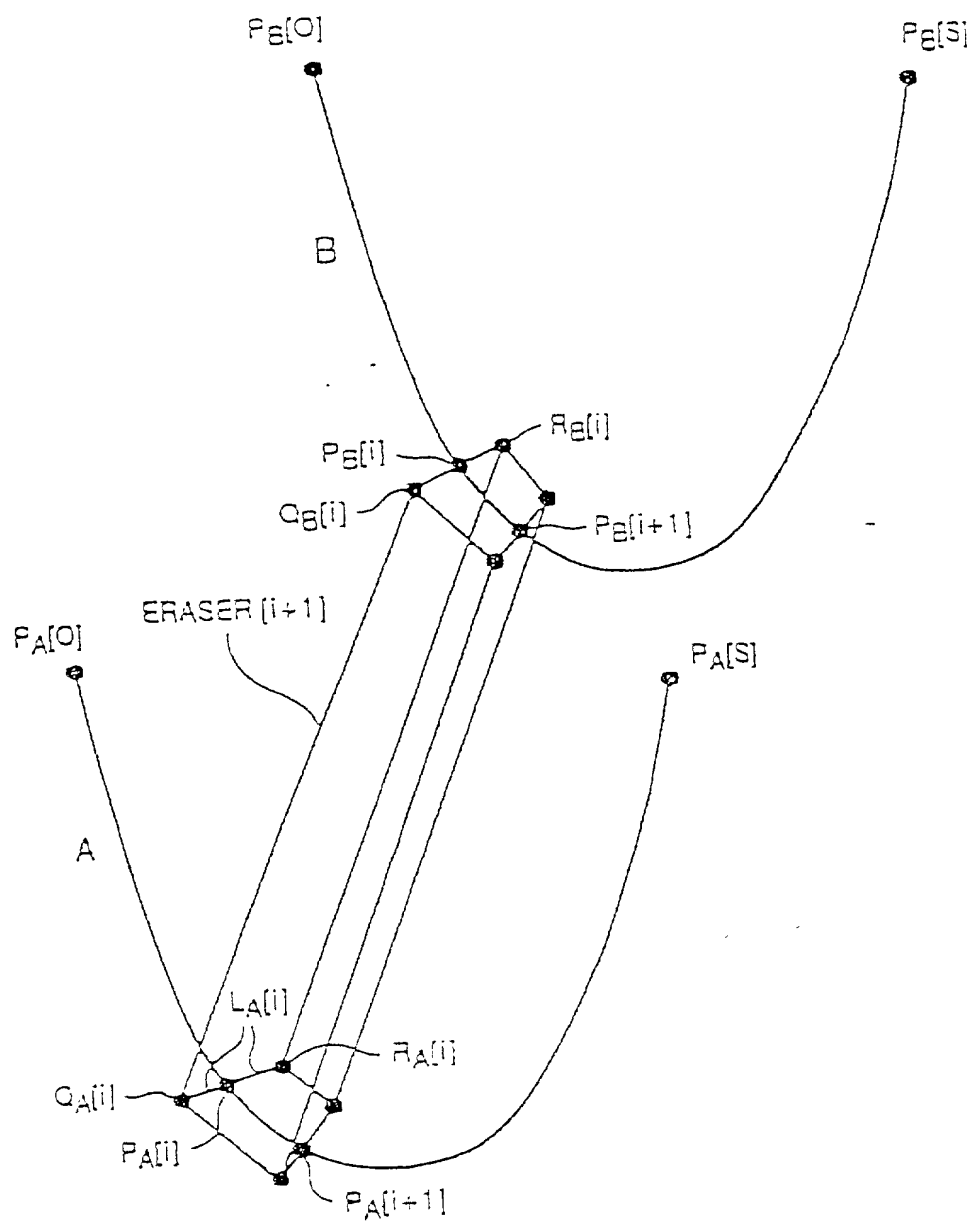


FIG. 4B

```

graph TD
    A[FIND BOUNDING BOX FOR EACH HI-RES AND EACH LOW-RES COMPONENT] --> B[CHOOSE A HI-RES BOUNDING BOX]
    B --> C[CHOOSE A LOW-RES BOUNDING BOX]
    C --> D["SUM THE DISTANCE BETWEEN THE MINIMAL VERTICES OF THE LOW-RES, HIGH-RES BOXES AND THE DISTANCE BETWEEN THE MAXIMAL VERTICES OF THE LOW-RES, HI-RES BOXES"]
    D --> E{HAVE ALL LOW-RES BOXES BEEN CHOSEN FOR THIS HI-RES BOX?}
    E -- NO --> C
    E -- YES --> F[SELECT MINIMUM SUM]
    F --> G{IS SUM BELOW THRESHOLD?}
    G -- YES --> H["MATCH" LO-RES COMP THAT PRODUCED MINIMUM SUM TO CURRENT HI-RES COMP]
    G -- NO --> I["COPY CURRENT HI-RES COMPONENT INTO LO-RES SECTION/VECTOR AND 'MATCH' IT TO HI-RES COMPONENT FROM WHICH IT WAS JUST COPIED"]
    H --> J{ARE ALL HI-RES BOXES MATCHED?}
    I --> J
    J -- NO --> B
    J -- YES --> K[DISCARD (ERASE) ANY UNMATCHED LOW-RES COMPONENTS]

```

FIG. 5

00745835-132100

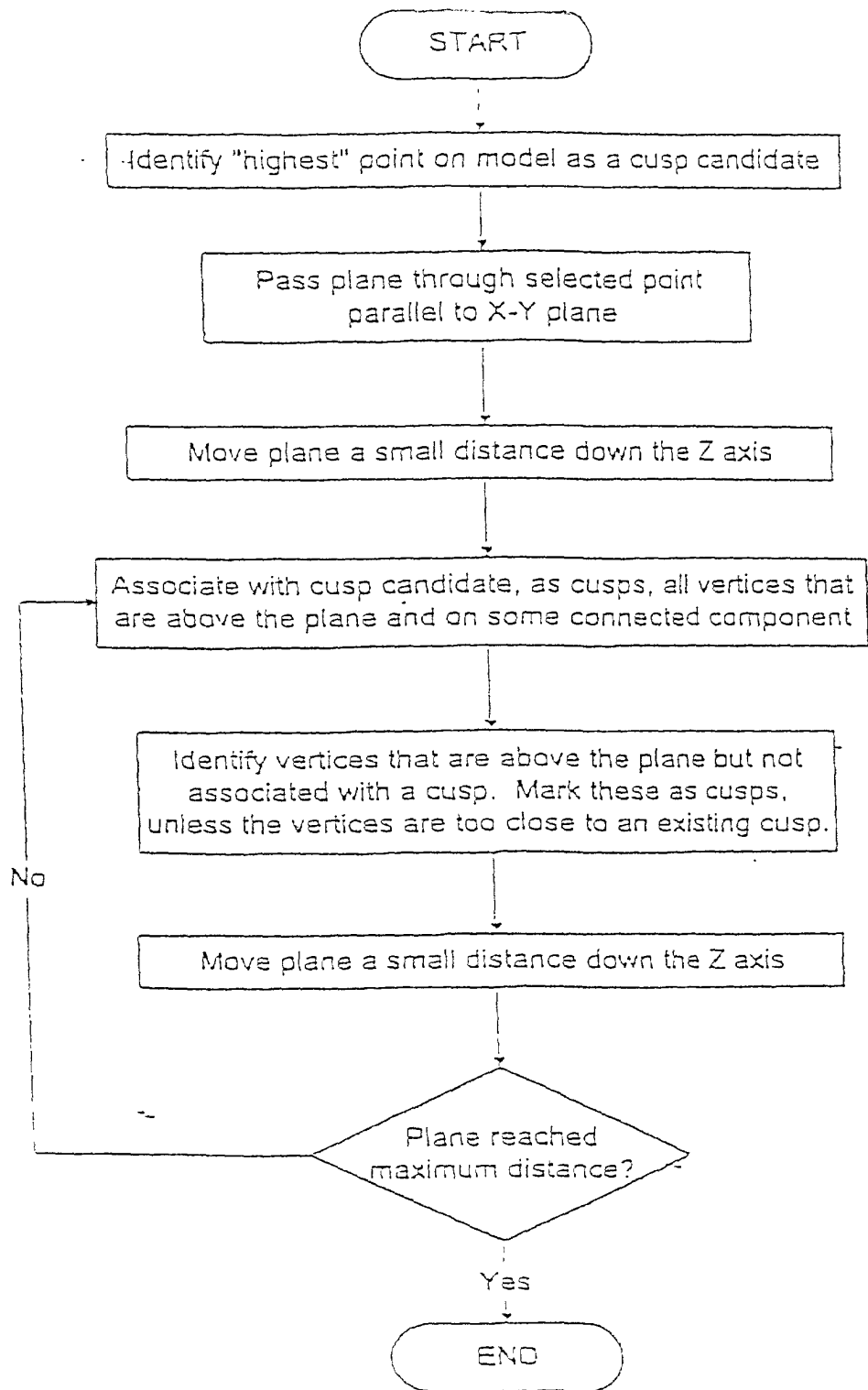


FIG. 6A



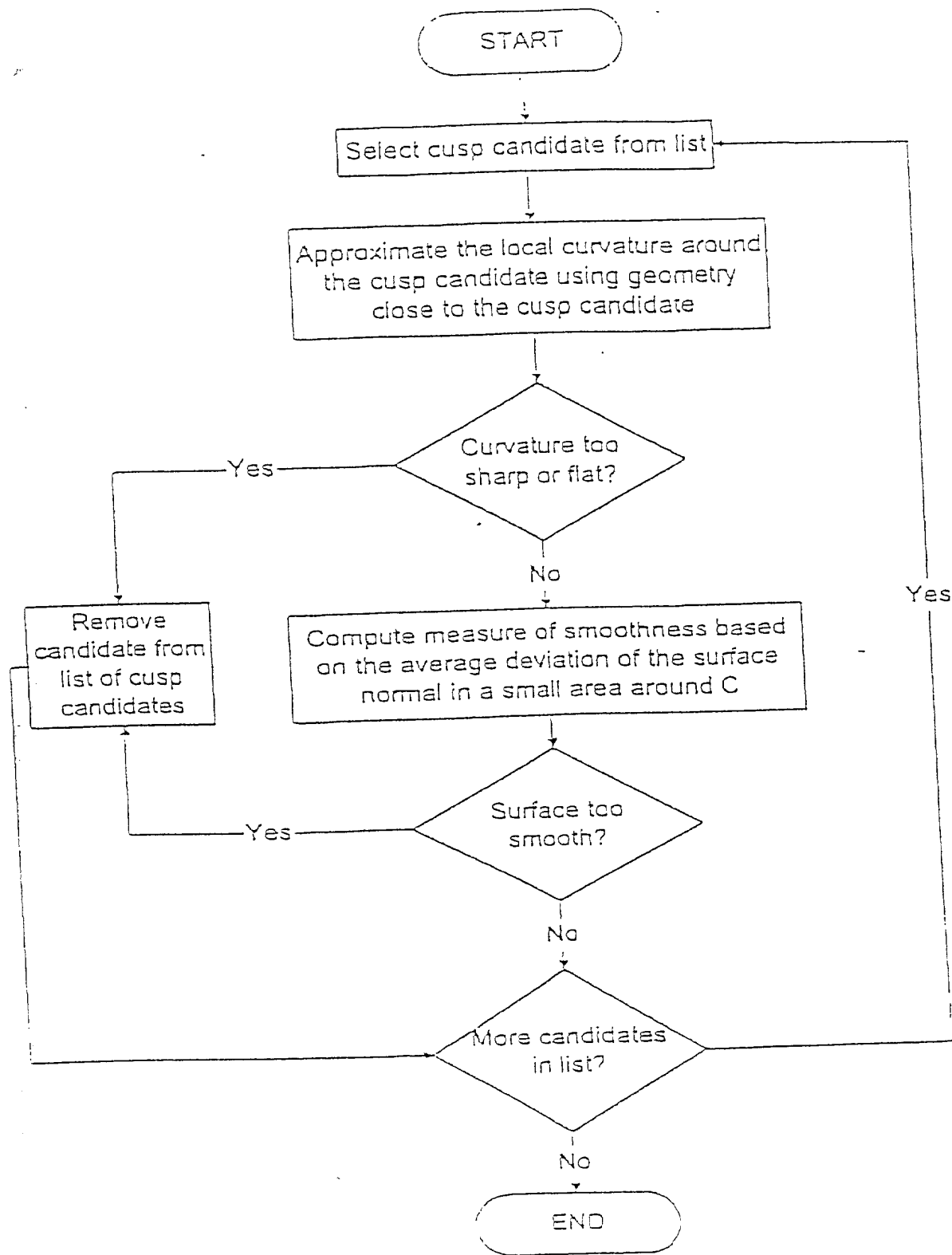
[illegible]

FIG. 6B

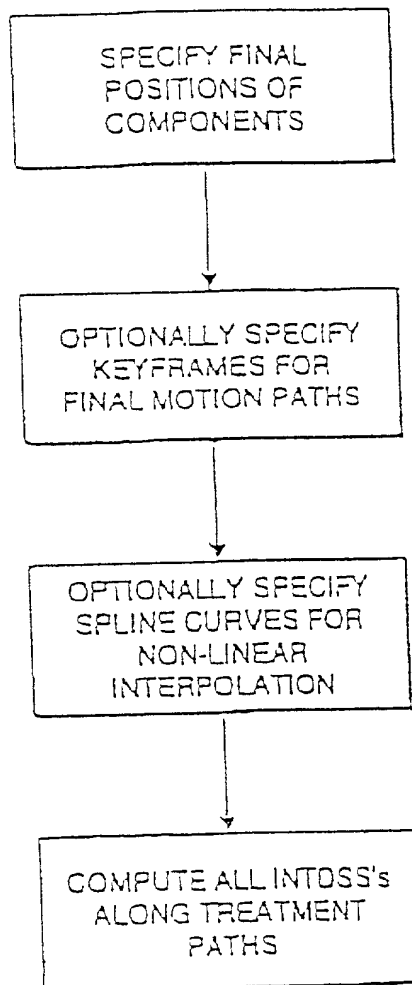


FIG. 7

001221 225460

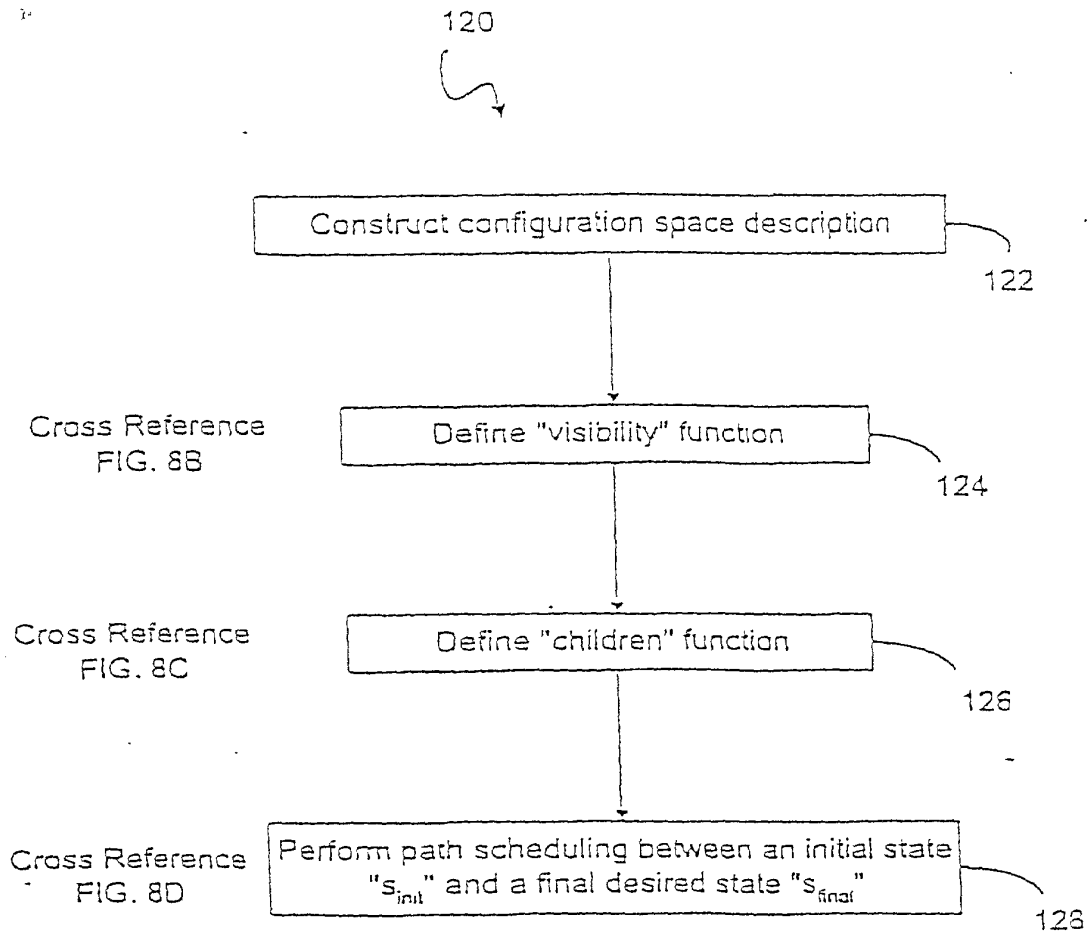


FIG. 8A

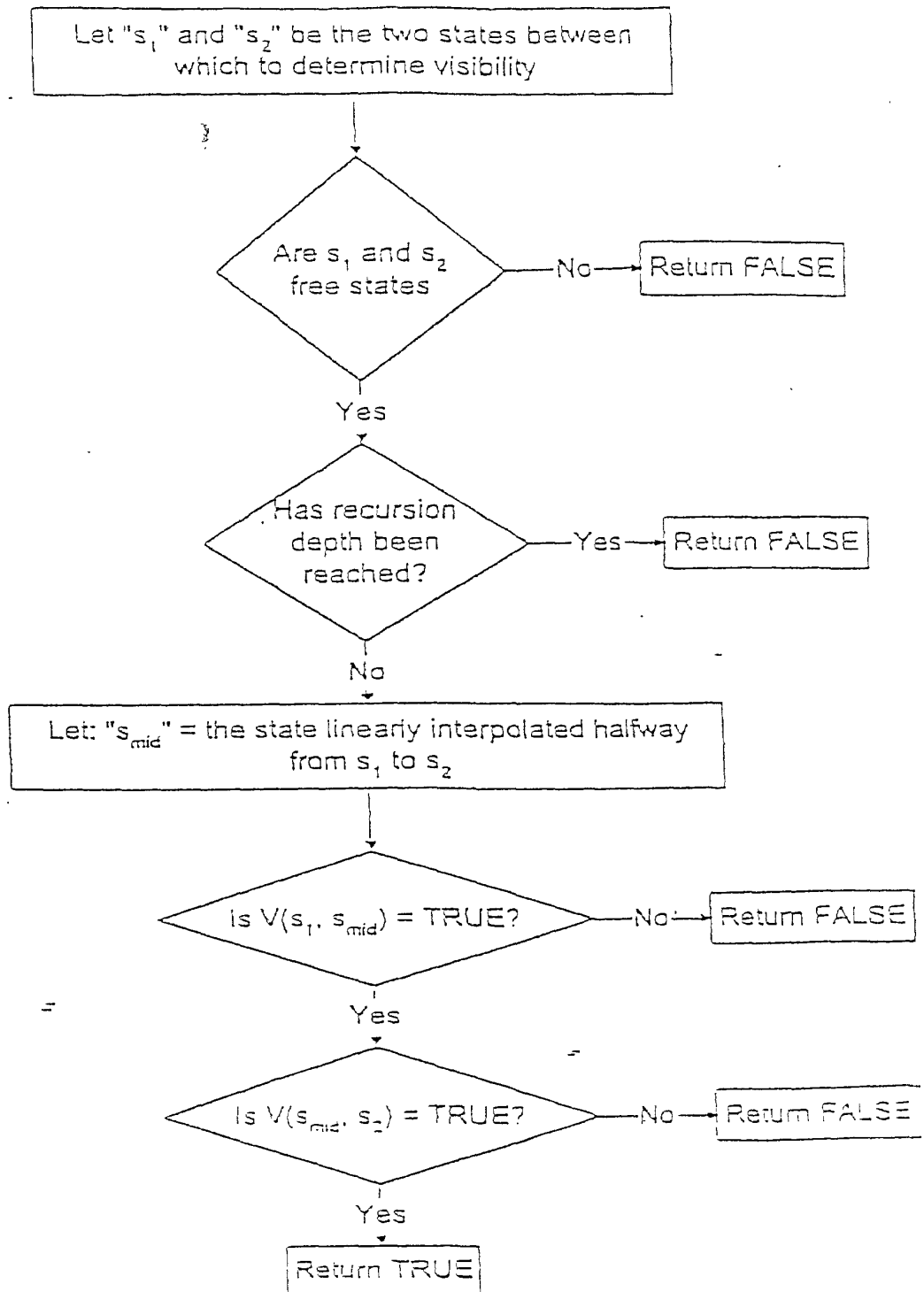


FIG. 8B

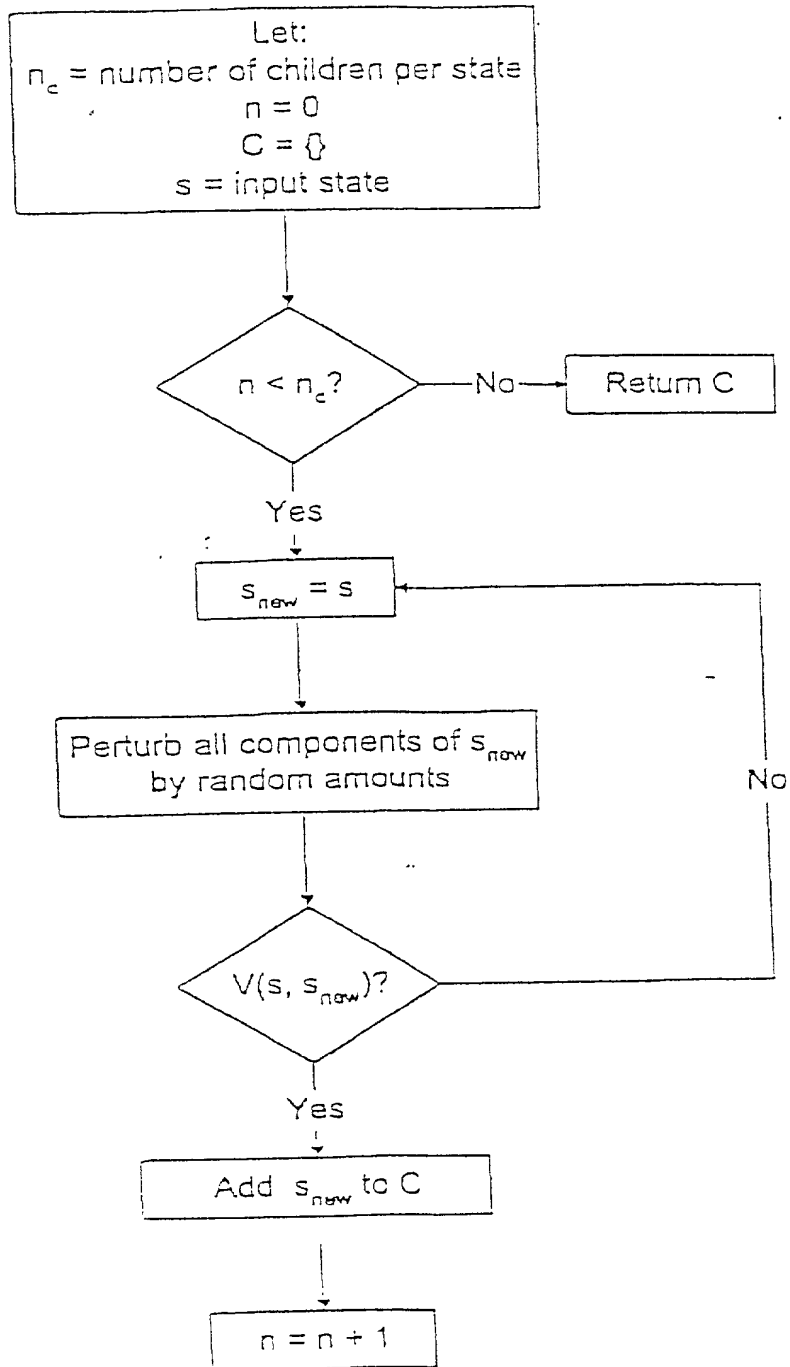


FIG. 8C

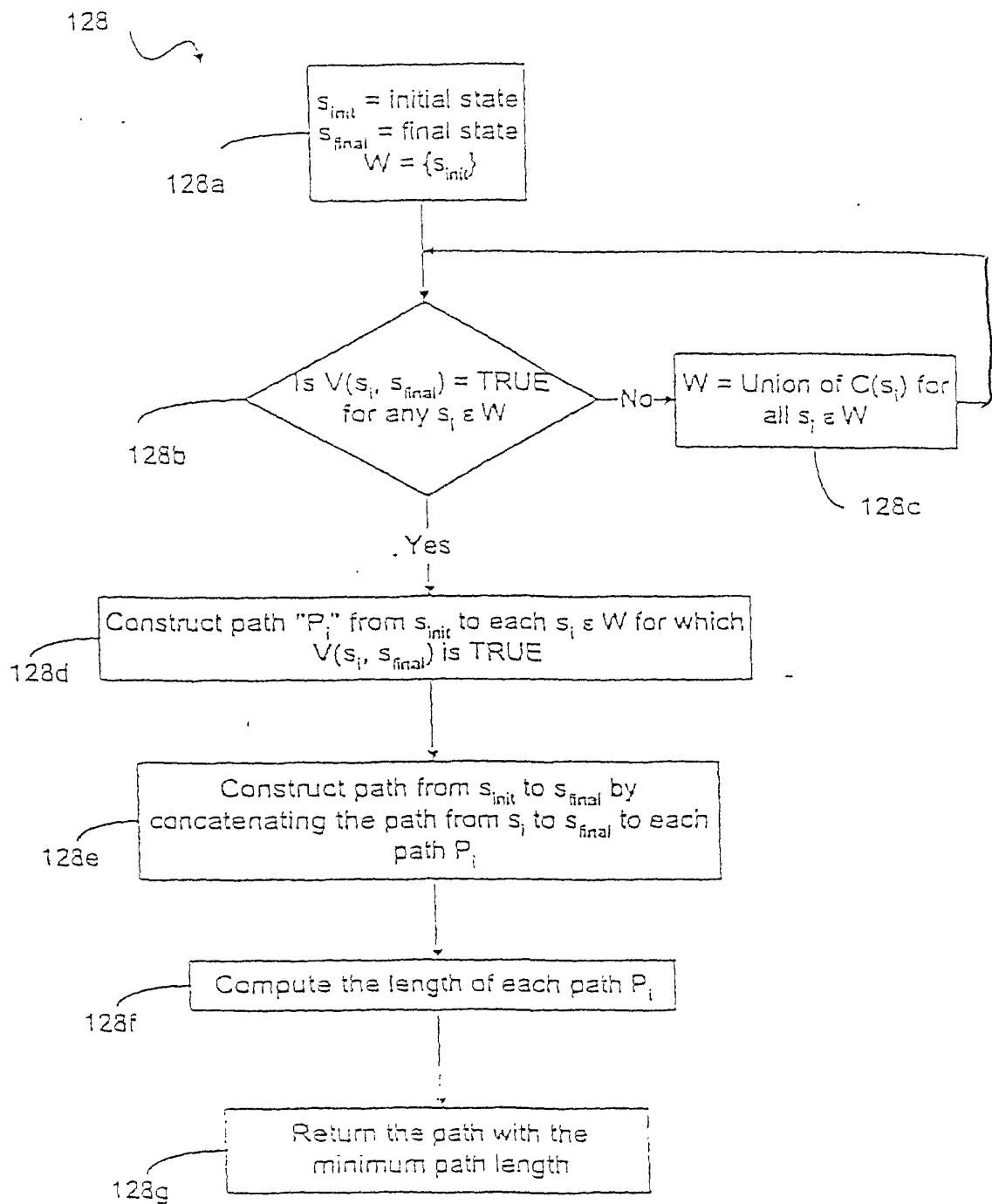


FIG. 8D

00745835 12100

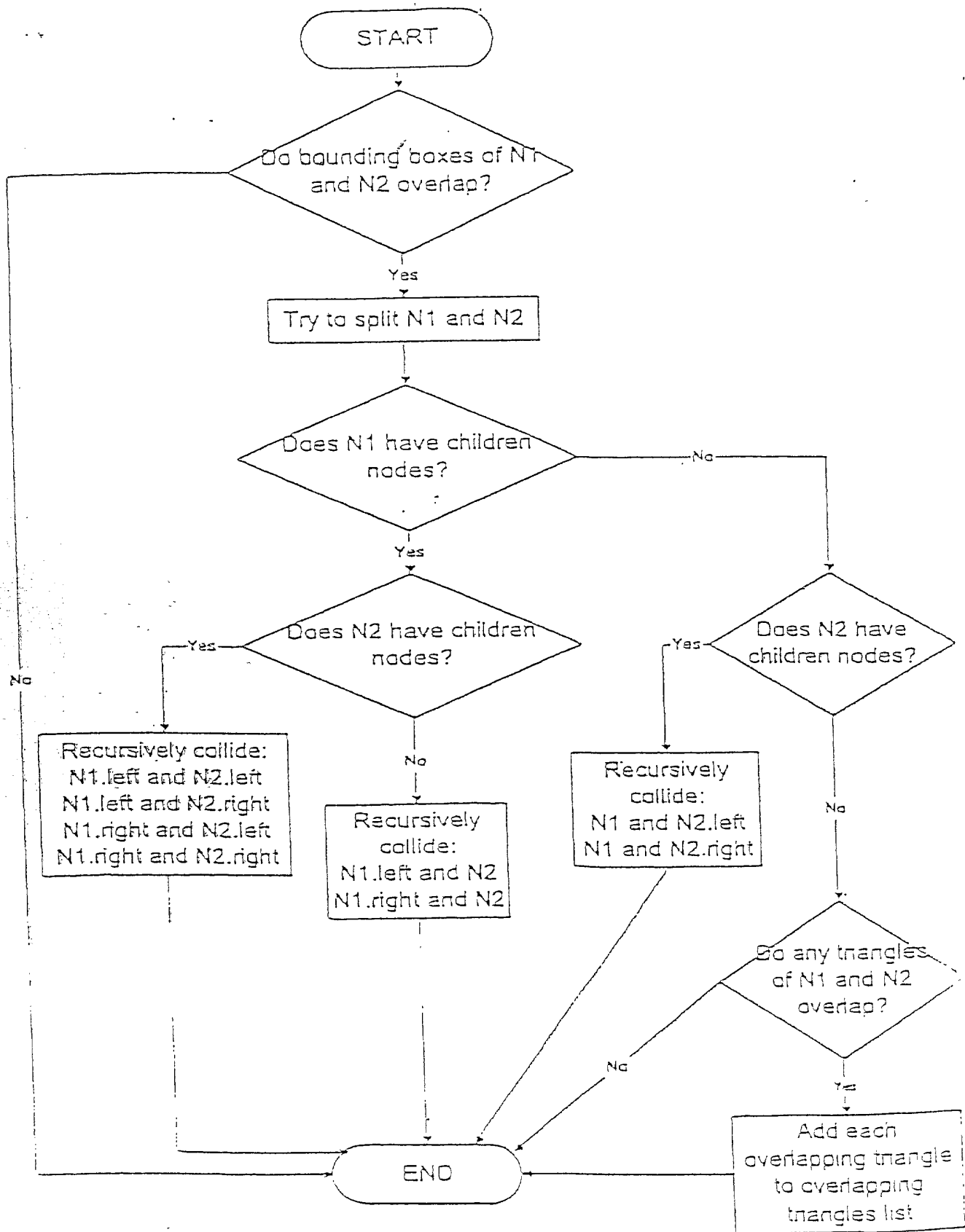


FIG. 9A

START

Can this node be split?

Yes

Compute splitting plane for this node and partition data

Can partition be done?

No

Mark this node  
"unsplittable"

Yes

Create 2 children nodes,  
each containing the data  
from one side of the partition

Can "left" node be split  
further?

No

Mark "left" node  
"unsplittable"

Yes

Can "right" node be  
split further?

No

Mark "right" node  
"unsplittable"

Yes

Mark this node as "split"

END

No

FIG. 93



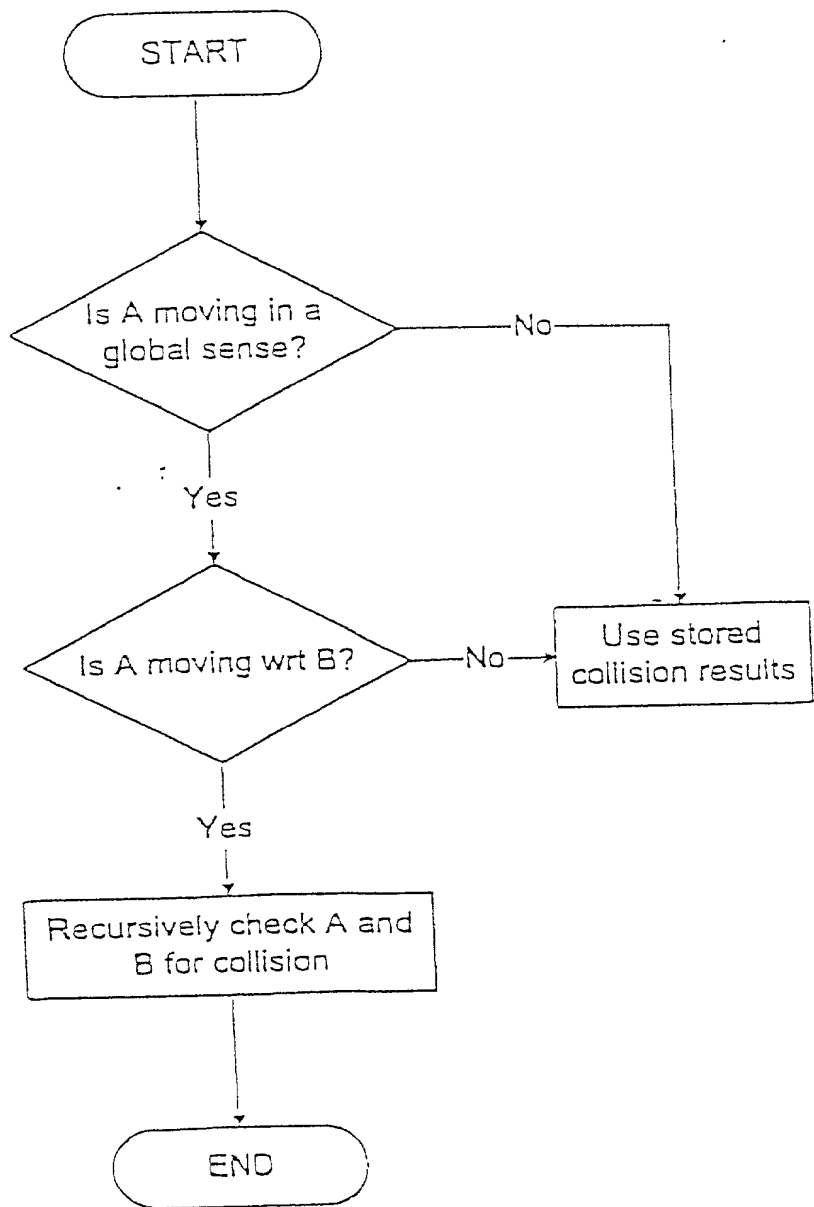


FIG. 9C

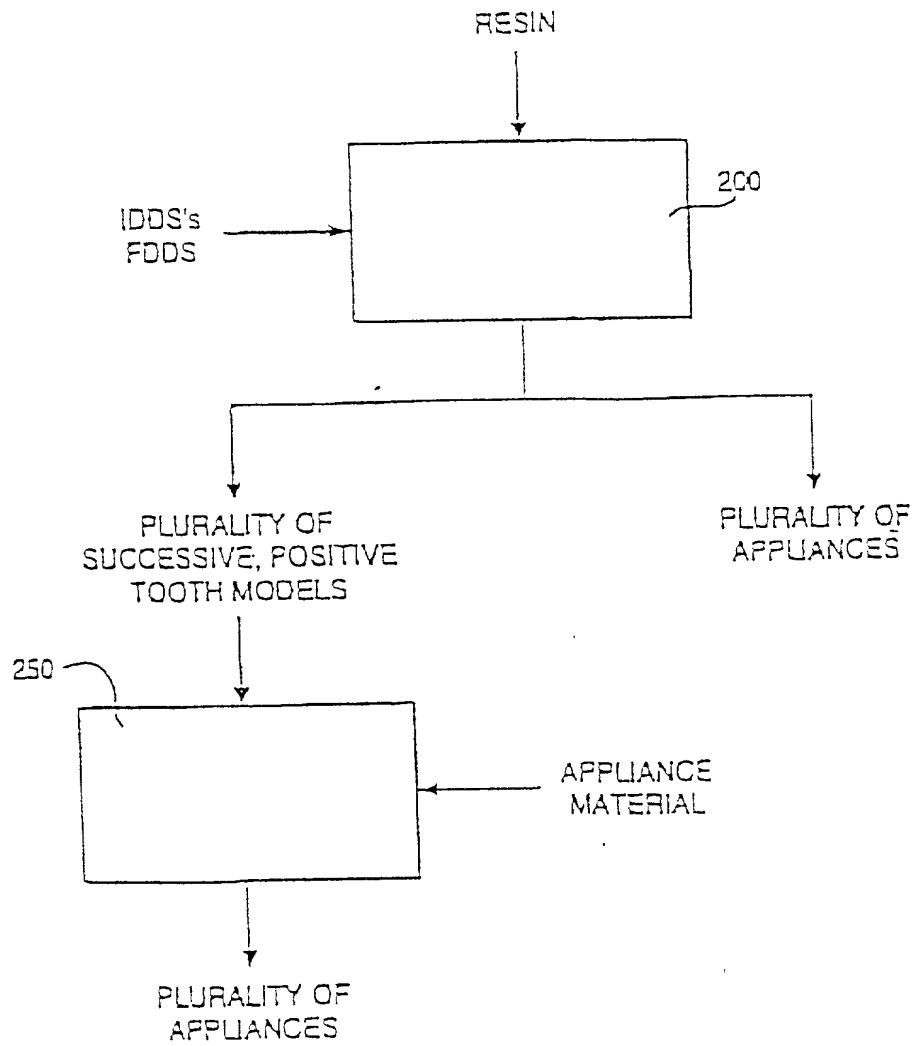


FIG. 10

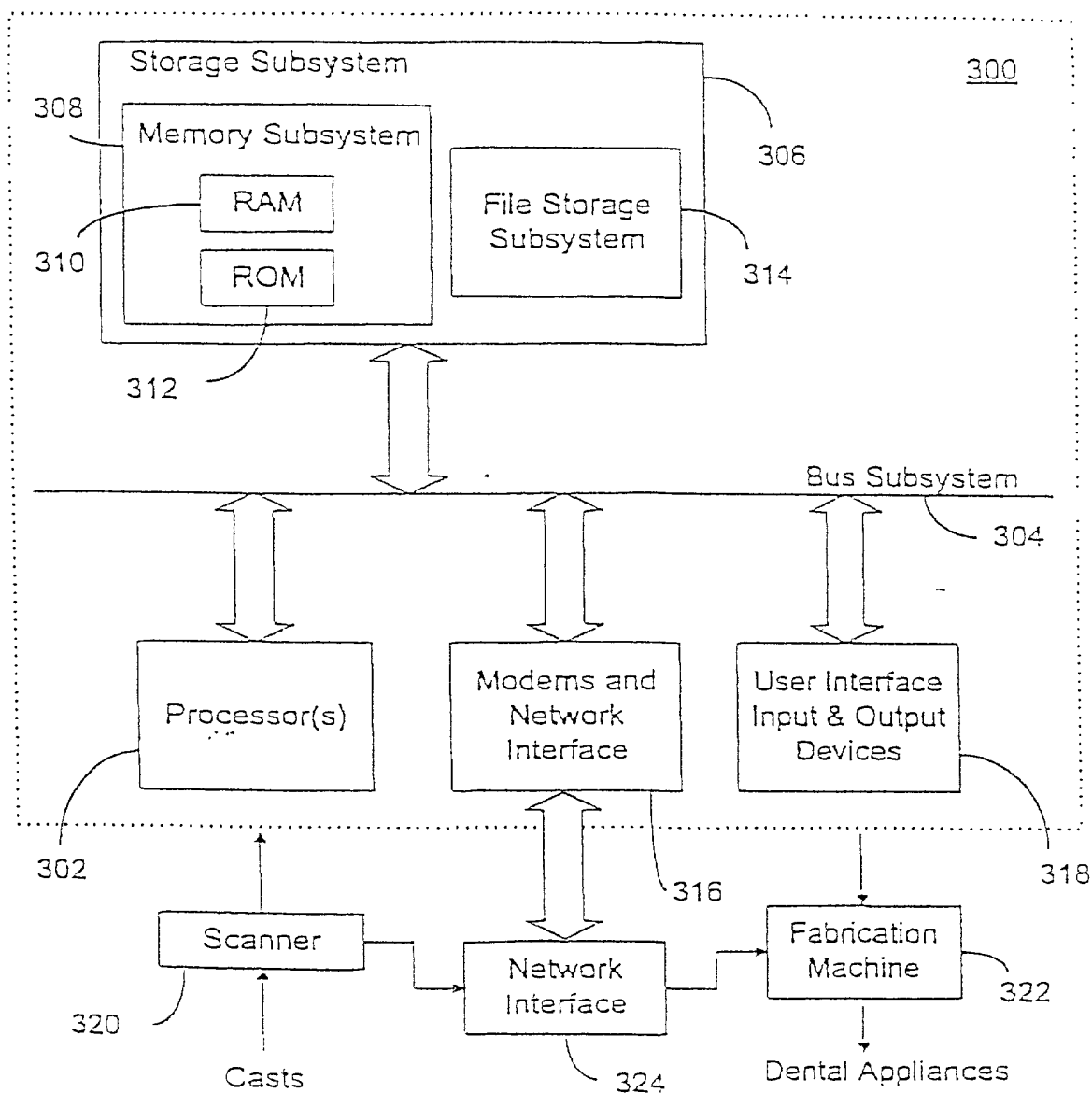


FIG. 11

0074500 1100

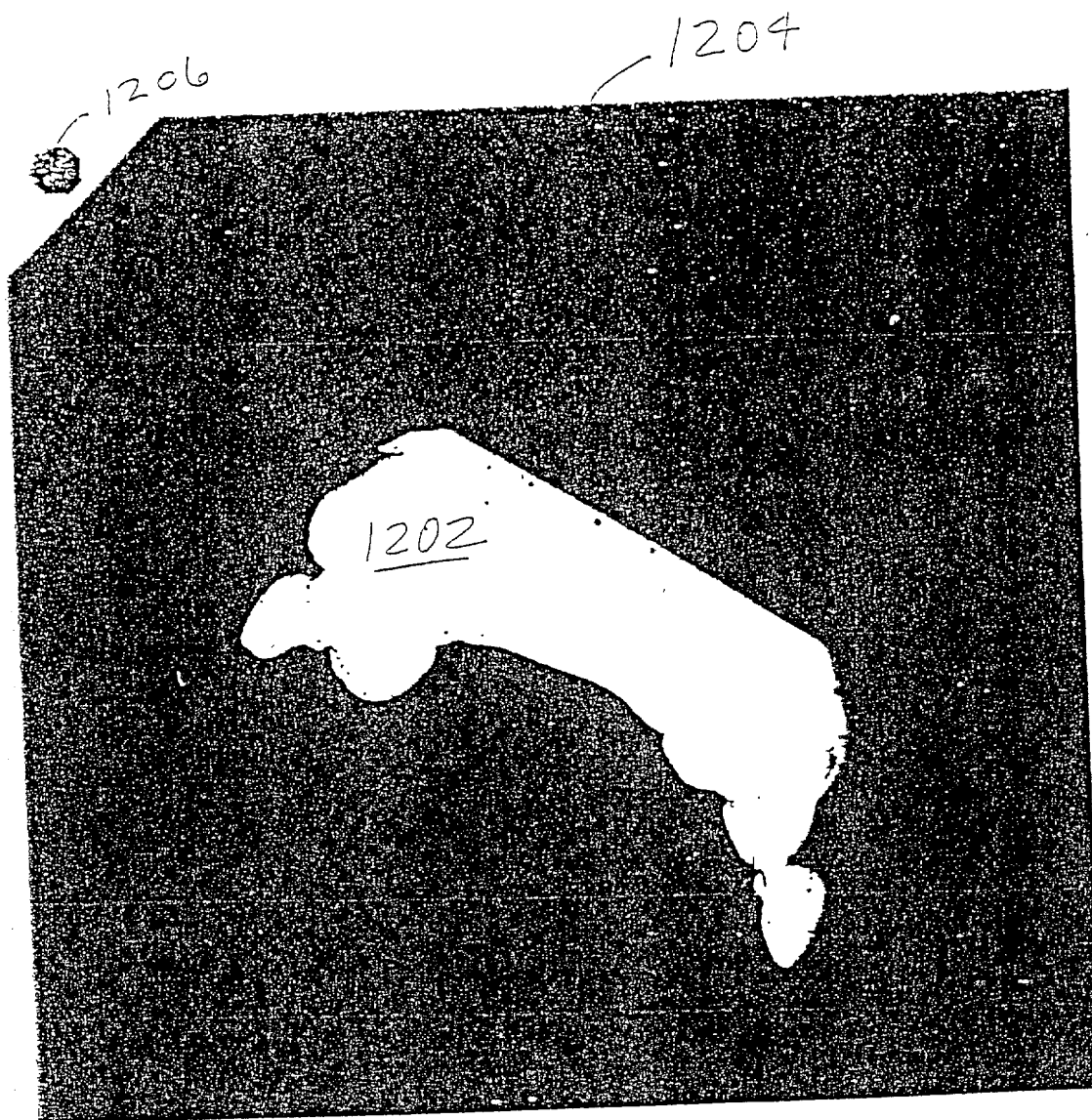


FIG. 12

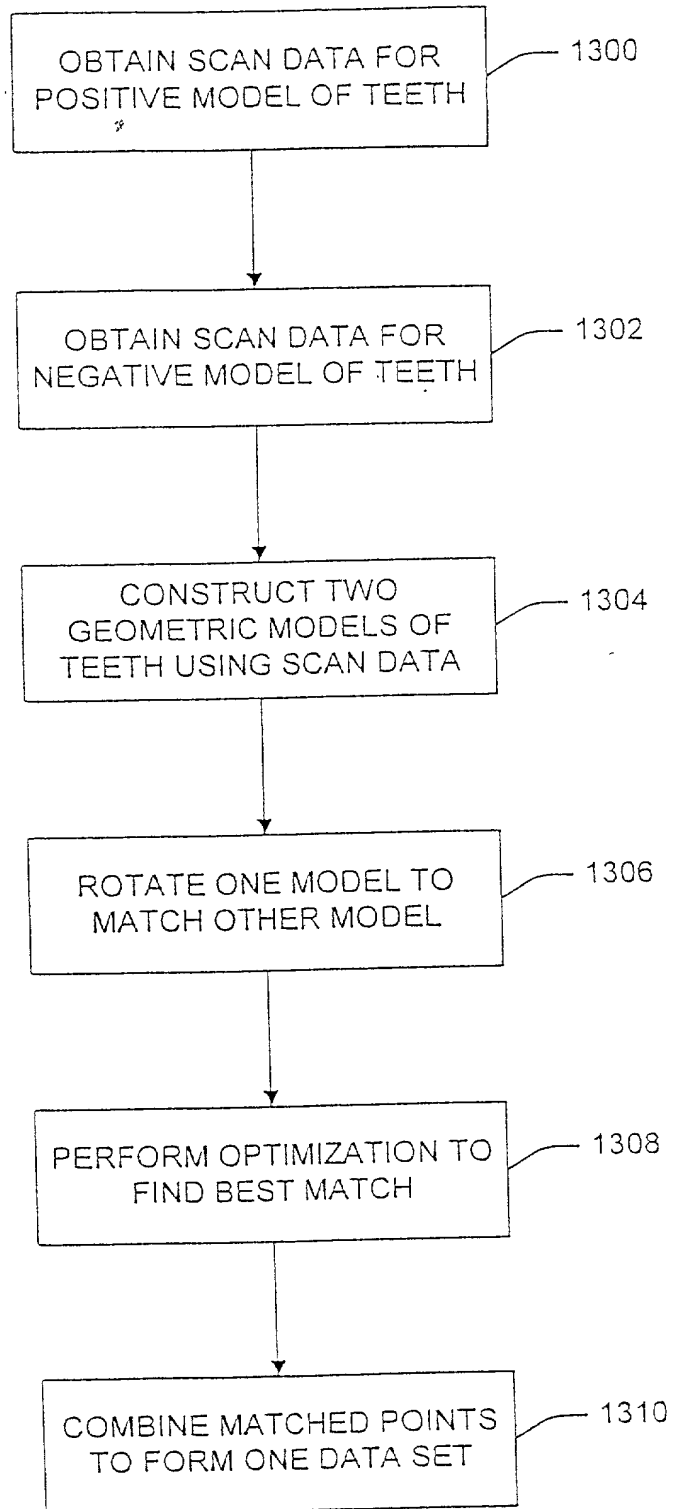


FIG. 13

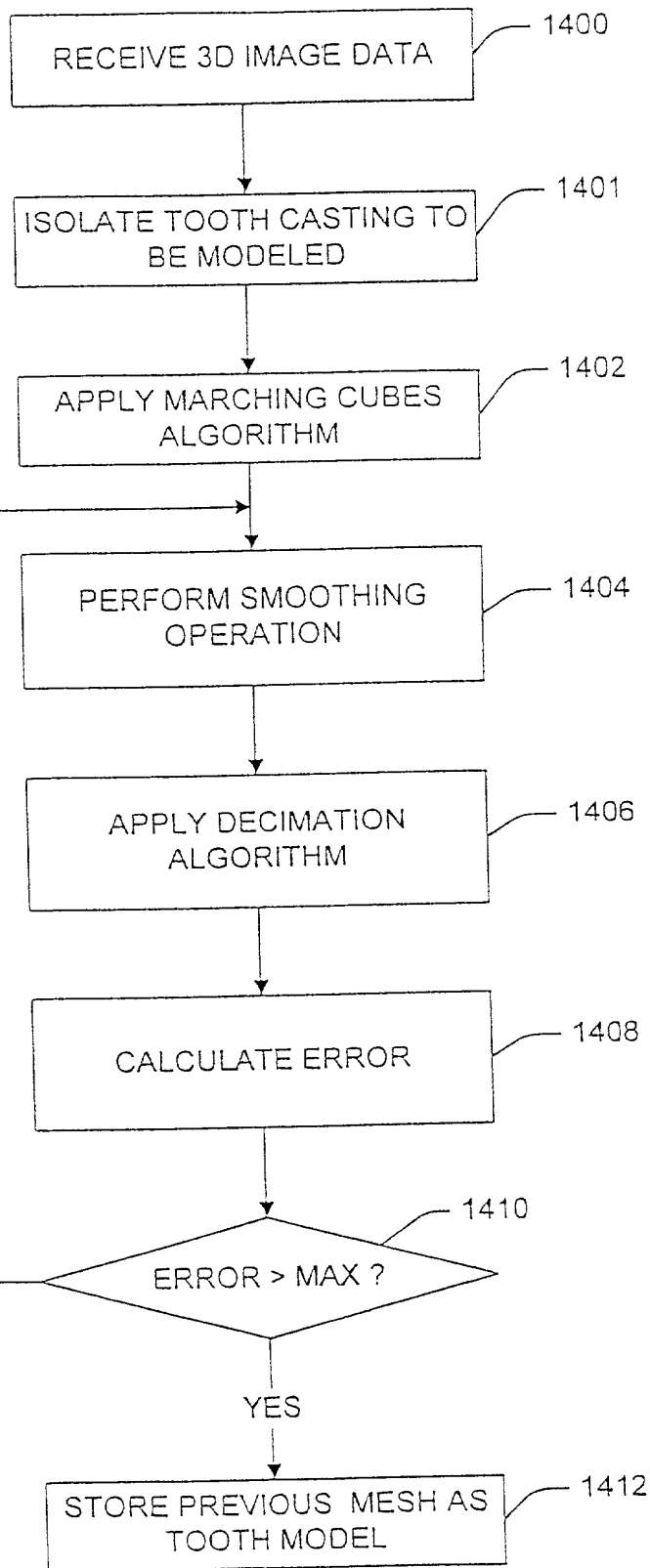


FIG. 14

A diagram showing a sequence of nodes connected by edges. The nodes are labeled  $l$ ,  $l_1$ ,  $l_2$ ,  $l_3$ ,  $l_4$ , and  $F$ . The connections are as follows:  $l$  is connected to  $l_1$  by a horizontal edge.  $l_1$  is connected to  $l_2$  by an edge sloping upwards and to the right.  $l_2$  is connected to  $l_3$  by an edge sloping upwards and to the right.  $l_3$  is connected to  $l_4$  by an edge sloping downwards and to the right.  $l_4$  is connected to  $F$  by an edge sloping downwards and to the right. There are also three dots ( $\dots$ ) above the edge between  $l$  and  $l_1$ , and three dots ( $\dots$ ) above the edge between  $l_2$  and  $l_3$ .

FIG. 15C

```
graph TD; 1600[SELECT INTERMEDIATE TOOTH POSITIONS] --> 1602[CREATE SPLINE CURVES]; 1602 --> 1604[SAMPLE BETWEEN INTERMEDIATE TOOTH POSITIONS]; 1604 --> 1606{COLLISIONS?}; 1606 -- YES --> 1608[ALTER AT LEAST ONE PATH IN EACH COLLIDING PAIR]; 1608 --> 1602; 1606 -- NO --> 1610[STORE PATHS];
```

FIG. 16



Table 1. Demographic characteristics of the study population	
Age (years)	65.0 ± 10.0
Gender	Male 60.0%
Education	High school 40.0%
Marital status	Married 70.0%
Occupation	Retired 50.0%
Income (TL/month)	1000-2000 30.0%
Health status	Good 60.0%
Smoking status	Smoker 40.0%
Alcohol consumption	Occasional 20.0%
Comorbidities	Hypertension 30.0%
Diabetes mellitus	10.0%
Coronary artery disease	20.0%
Chronic kidney disease	5.0%
Chronic liver disease	2.0%
Chronic respiratory disease	15.0%
Chronic pain	10.0%
Chronic mental health issues	5.0%
Chronic medication use	30.0%
Chronic hospitalization	10.0%
Chronic disability	5.0%
Chronic social isolation	10.0%
Chronic loneliness	15.0%
Chronic depression	10.0%
Chronic anxiety	5.0%
Chronic stress	10.0%
Chronic fatigue	10.0%
Chronic weakness	10.0%
Chronic pain	10.0%
Chronic discomfort	10.0%
Chronic inconvenience	10.0%
Chronic frustration	10.0%
Chronic dissatisfaction	10.0%
Chronic unhappiness	10.0%
Chronic sadness	10.0%
Chronic anger	10.0%
Chronic fear	10.0%
Chronic worry	10.0%
Chronic concern	10.0%
Chronic anxiety	10.0%
Chronic stress	10.0%
Chronic fatigue	10.0%
Chronic weakness	10.0%
Chronic pain	10.0%
Chronic discomfort	10.0%
Chronic inconvenience	10.0%
Chronic frustration	10.0%
Chronic dissatisfaction	10.0%
Chronic unhappiness	10.0%
Chronic sadness	10.0%
Chronic anger	10.0%
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Chronic worry	10.0%
Chronic concern	10.0%
Chronic anxiety	10.0%
Chronic stress	10.0%
Chronic fatigue	10.0%
Chronic weakness	10.0%
Chronic pain	10.0%
Chronic discomfort	10.0%
Chronic inconvenience	10.0%
Chronic frustration	10.0%
Chronic dissatisfaction	10.0%
Chronic unhappiness	10.0%
Chronic sadness	10.0%
Chronic anger	10.0%
Chronic fear	10.0%
Chronic worry	10.0%
Chronic concern	10.0%
Chronic anxiety	10.0%
Chronic stress	10.0%
Chronic fatigue	10.0%
Chronic weakness	10.0%
Chronic pain	10.0%
Chronic discomfort	10.0%
Chronic inconvenience	10.0%
Chronic frustration	10.0%
Chronic dissatisfaction	10.0%
Chronic unhappiness	10.0%
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Chronic worry	10.0%
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Chronic anxiety	10.0%
Chronic stress	10.0%
Chronic fatigue	10.0%
Chronic weakness	10.0%
Chronic pain	10.0%
Chronic discomfort	10.0%
Chronic inconvenience	10.0%
Chronic frustration	10.0%
Chronic dissatisfaction	10.0%
Chronic unhappiness	10.0%
Chronic sadness	10.0%
Chronic anger	10.0%
Chronic fear	10.0%
Chronic worry	10.0%
Chronic concern	10.0%
Chronic anxiety	10.0%
Chronic stress	10.0%
Chronic fatigue	10.0%
Chronic weakness	10.0%
Chronic pain	10.0%
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Chronic inconvenience	10.0%
Chronic frustration	10.0%
Chronic dissatisfaction	10.0%
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Chronic discomfort	10.0%
Chronic inconvenience	10.0%
Chronic frustration	10.0%
Chronic dissatisfaction	10.0%
Chronic unhappiness	10.0%
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Chronic fear	10.0%
Chronic worry	10.0%
Chronic concern	10.0%
Chronic anxiety	10.0%
Chronic stress	10.0%
Chronic fatigue	10.0%
Chronic weakness	10.0%
Chronic pain	10.0%
Chronic discomfort	10.0%
Chronic inconvenience	10.0%
Chronic frustration	10.0%
Chronic dissatisfaction	10.0%
Chronic unhappiness	10.0%
Chronic sadness	10.0%

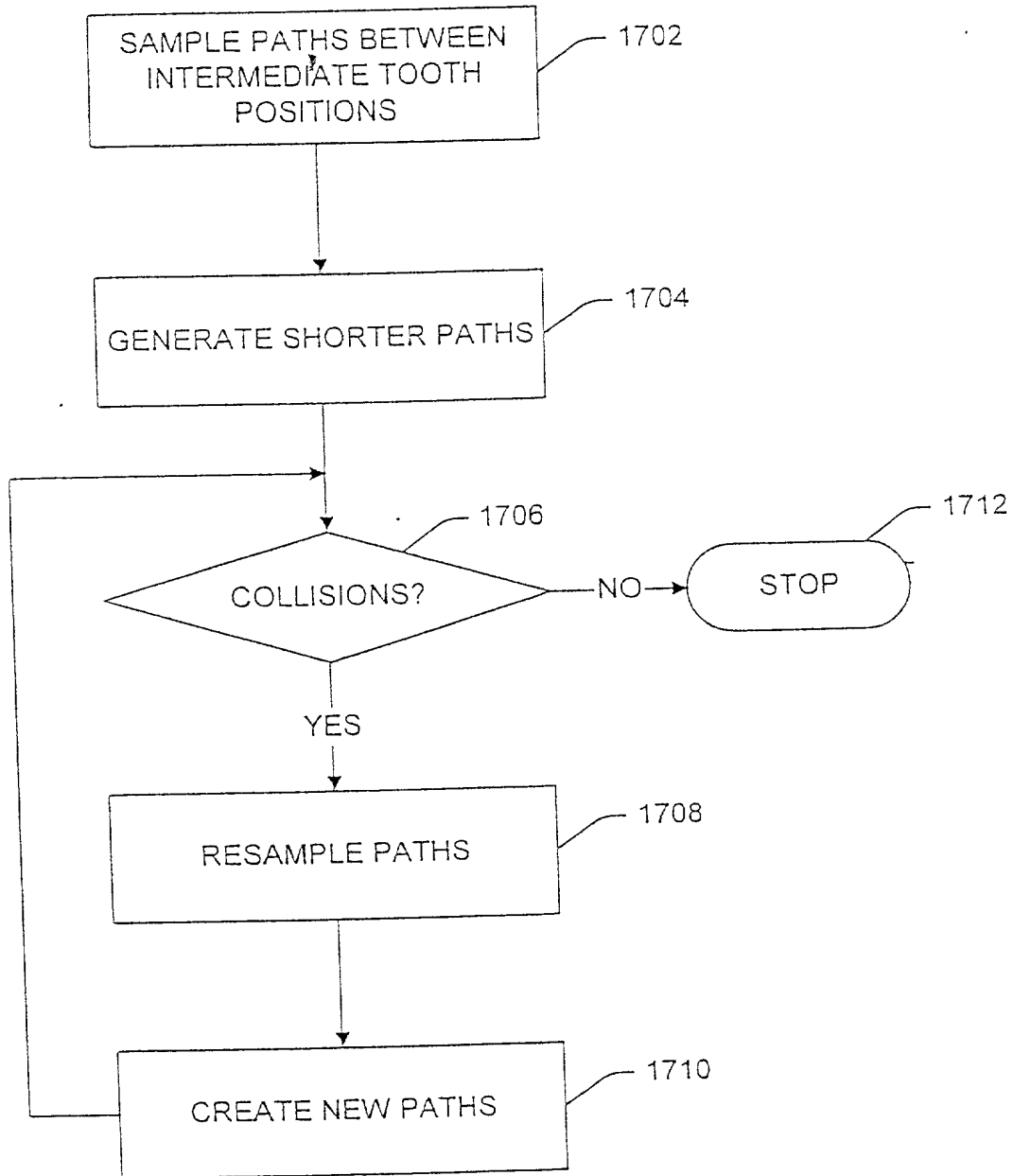


FIG. 17

Diagram illustrating a system 1800. The system includes two objects, 1804 and 1806, positioned on opposite sides of a vertical plane 1808. The distance from the plane 1808 to object 1804 is labeled  $Z_1$ , and the distance from the plane 1808 to object 1806 is labeled  $Z_2$ . A coordinate system 1802 is shown at the bottom left, with axes X, Y, and Z. A direction indicator at the bottom right shows 'BACK' and 'FRONT' with a double-headed arrow.

FIG. 18

RECEIVE DATA INDICATING  
POSITIONS OF TEETH 1900

CREATE NEUTRAL PLANE 1902

CREATE Z-AXIS 1904

FIND DISTANCE FROM PLANE  
TO TEETH AT GRID POINT 1906

$Z_1 \leq Z_2$  ? 1908

YES

CREATE COLLISION  
MESSAGE 1910

ALL POINTS TESTED? 1912

YES

EXIT  
ROUTINE

FIG. 19

007221" 5235460

2000

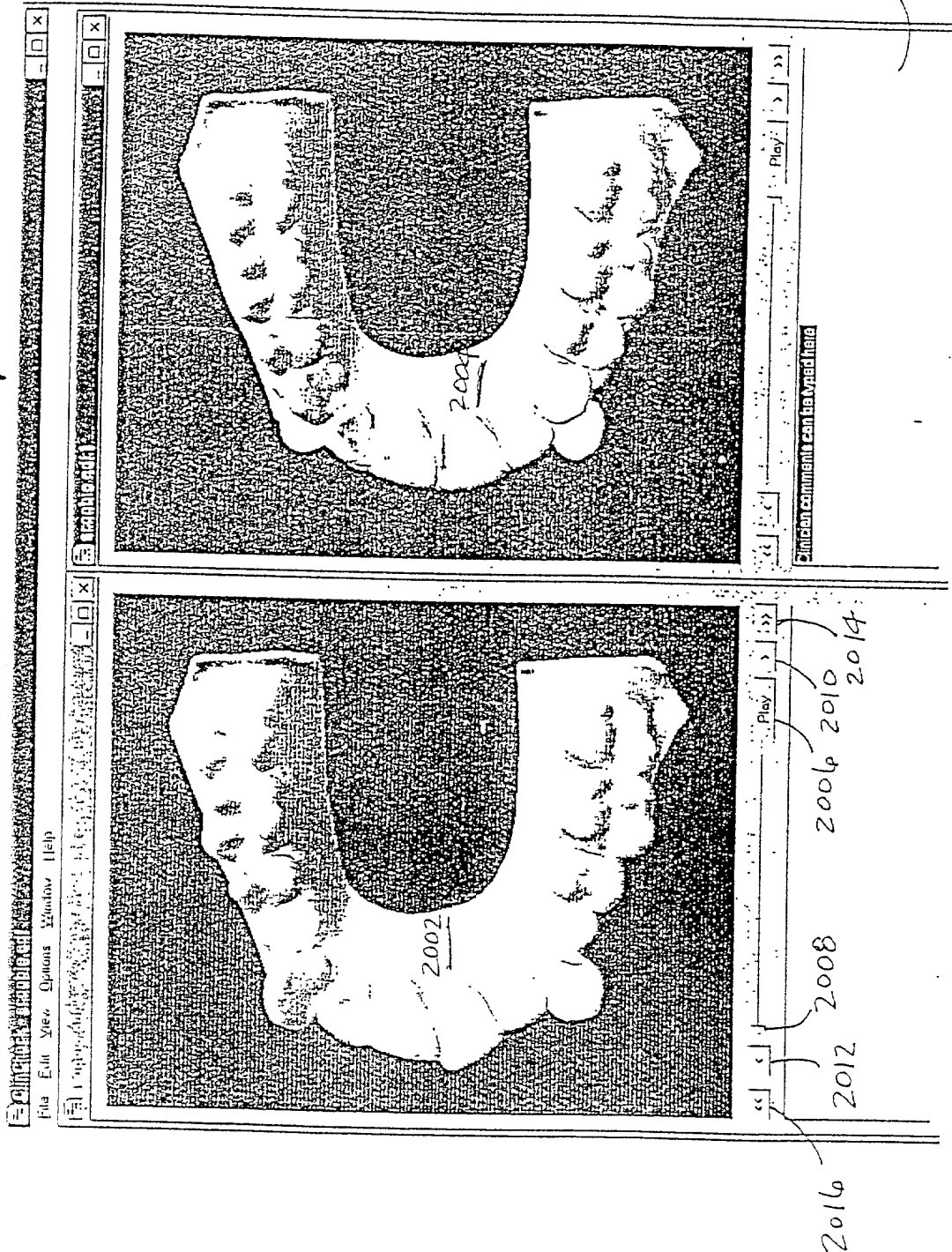


FIG. 20

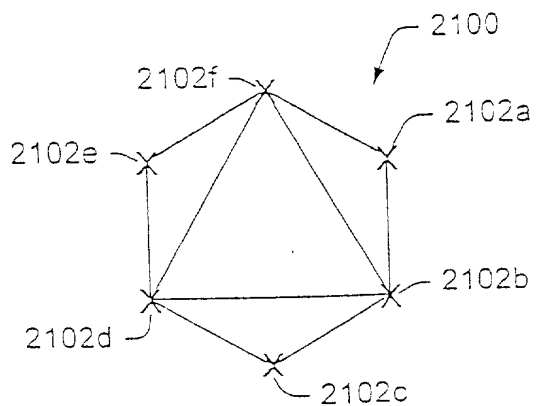


FIG. 21A

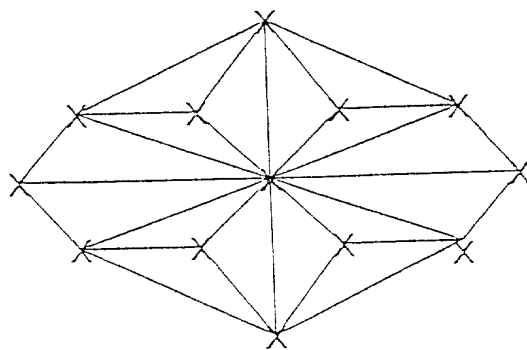


FIG. 21B